

PRODUCTIVITY NOW

How an underutilized — yet proven — model of higher education can lift Canada's economy out of the productivity crisis



**BUILDERS OF
BRILLIANCE**

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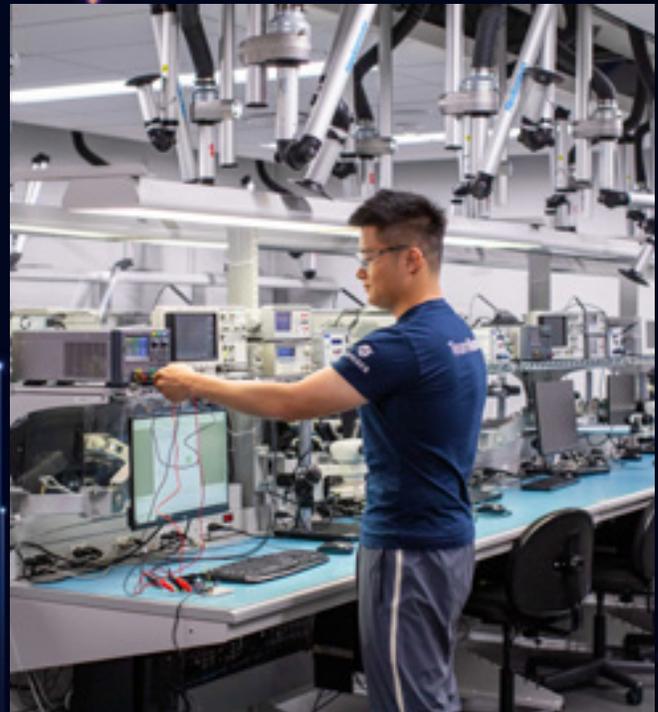
HUMBER POLYTECHNIC: MEETING THE MOMENT

This report is an initiative of Humber Polytechnic, Canada's largest and most comprehensive polytechnic institution, serving over 76,000 learners through more than 200 full-time programs. Founded in 1967, Humber embodies a mission-driven model of polytechnic education whose contributions to national economic growth and productivity are direct and substantial.

- Humber created a total of 45 new programs in 2024-25 in response to the changing needs of the economy and the feedback we received from industry partners.
- Humber offers more than 30 degree-level programs designed to provide a potent combination of industry experience and academic qualifications, with more than 60% of faculty members holding doctoral credentials.
- Humber has launched its first graduate programs: the Master of Computer Science – Cybersecurity Operations Management, and the Master of Engineering in Advanced Manufacturing.
- A national leader in applied research, Humber was ranked number one in Canada by Research Infosource for industry investment in applied research in 2025, and number two in Canada for both industry partnerships and paid student researchers.
- As the home of Canada's Advanced Manufacturing Skills Consortium, Humber works with a broad range of industry players to advance Canadian capability and productivity in the service of national objectives.

- In partnership with Ontario Tech University, Humber is developing the workforce that will power Ontario's future capabilities in nuclear energy.
- A partnership with modular-housing developer Stelumar Advanced Manufacturing Inc. (SAMI) will place Humber at the forefront of homebuilding innovation, training workers in new construction technologies that will help solve Canada's housing shortage.
- In partnership with Siemens Canada, Humber is equipping students with the skills to remain adaptable and resilient as emerging technologies- such as smart grids- become integral to Canada's clean energy future.

Humber Polytechnic strives to be the bridge between thinking and doing, shaping minds that can both imagine and execute, an institution that helps to build what has yet to be imagined.





EXECUTIVE SUMMARY

Canada is facing a national productivity emergency — and incremental change is no longer enough. For decades, Canada has responded to weak productivity growth with familiar policies, modest reforms, and prolonged study. The results are now unmistakable: productivity has stalled, peer economies are pulling away, and Canadians are paying the price through stagnant wages, declining competitiveness, and growing economic insecurity. Continuing to do the same things will only deliver the same unsatisfactory outcomes.

What is now required is not refinement, but resolve. Canada must have the courage to change decades of policy thinking and to accept a measured degree of risk in adopting new, proven models. The greater risk today lies in inaction — in clinging to systems designed for a different economic era while the global economy accelerates around us.

Despite one of the highest rates of post-secondary attainment in the world, Canada's education and innovation systems are no longer translating learning into productivity. Labour productivity has declined since 2020, business investment in research and development remains well below OECD norms, and firms struggle to adopt new technologies — particularly artificial intelligence — at scale. The challenge is not a lack of talent or ideas; it is a systemic misalignment between education, industry, and national economic priorities, reinforced by policy frameworks that reward stability over speed and caution over outcomes.

“*Productivity growth does not happen by accident. It is built — deliberately — by institutions empowered to serve the national economy.*”

Ann Marie Vaughan

President and CEO, Humber Polytechnic

Other advanced economies have confronted similar challenges and chosen a different path. Countries such as Germany, the Netherlands, Ireland, and Finland made deliberate, sometimes difficult policy decisions to realign education with productivity, industry needs, and applied innovation. Central to their success has been the empowerment of strong polytechnic systems — institutions explicitly designed to move at the speed of industry, integrate learning with application, and convert knowledge into economic results. These reforms required political courage and a willingness to depart from long-standing assumptions about higher education — and they paid off.

Canada already has this model — but it remains underutilized.

Polytechnics represent one of the most powerful, proven, and immediately available levers to reverse Canada's productivity decline. Their mandate is distinct and essential: to link theory to practice, align credentials with labour-market demand, accelerate technology adoption, and collaborate directly with industry to solve real problems. Polytechnics are built for responsiveness, relevance, and impact — precisely what Canada's economy now requires.

Meeting this moment demands more than rhetorical support. Canada must be willing to make fundamental policy changes: aligning education more directly with productivity and industry outcomes; accelerating program approvals to match business decision-making timelines; increasing applied research investment; and accepting new models of collaboration between government, industry, and higher education. This will require governments to loosen constraints, tolerate experimentation, and judge success by results rather than precedent.

The lesson from global peers is clear: productivity growth does not happen by accident. It is built — deliberately — by institutions empowered to serve the national economy. Canada cannot afford further delay. Strengthening and unleashing the full potential of polytechnics is not an education reform at the margins; it is a core economic strategy.

The choice is stark. Canada can continue to manage decline through caution and continuity — or it can act with courage, learn from what works internationally, and accept the calculated risks necessary to renew productivity and prosperity. The time to break the glass is now.



CANADA'S NATIONAL PRODUCTIVITY EMERGENCY

In a March 2024 speech,¹ Bank of Canada Senior Deputy Governor Carolyn Rogers described in detail the country's "long-standing, poor record on productivity." In 1984 Canada's economic output was 88% that of the United States; by 2022 it had fallen to 71%. Ms. Rogers labeled the situation a national emergency, saying, "it's time to break the glass." It is a compelling call to action, because Canada today finds itself facing a perfect storm of economic upheavals.

The disruption of the global trading system is creating new uncertainties, from fractured supply chains to geopolitical tensions that now shape commerce. Canadian defense, health care, infrastructure and housing have all reached a tipping point. New technologies, including artificial intelligence, are transforming a vast range of business processes in sectors ranging from agriculture to manufacturing to financial services.

Meanwhile, global competition is accelerating. Nations that once trailed Canada in living standards and economic performance are now racing ahead, fueled by aggressive investments in applied research and development, advanced manufacturing, and skills development. According to the Organization for Economic Cooperation and Development (OECD), Canada's economy will be outperformed by other advanced economies through the end of the decade.²

Amid these trends, public opinion research from Abacus Data³ has revealed a fundamental shift in the mood of Canada's voting age population, from one of scarcity to one of precarity. Nearly 7 in 10 Canadians say they are worried about their ability to afford basic needs in the next 6 months. And their confidence in the country's fundamental systems, such as healthcare, housing and education, is fraying.

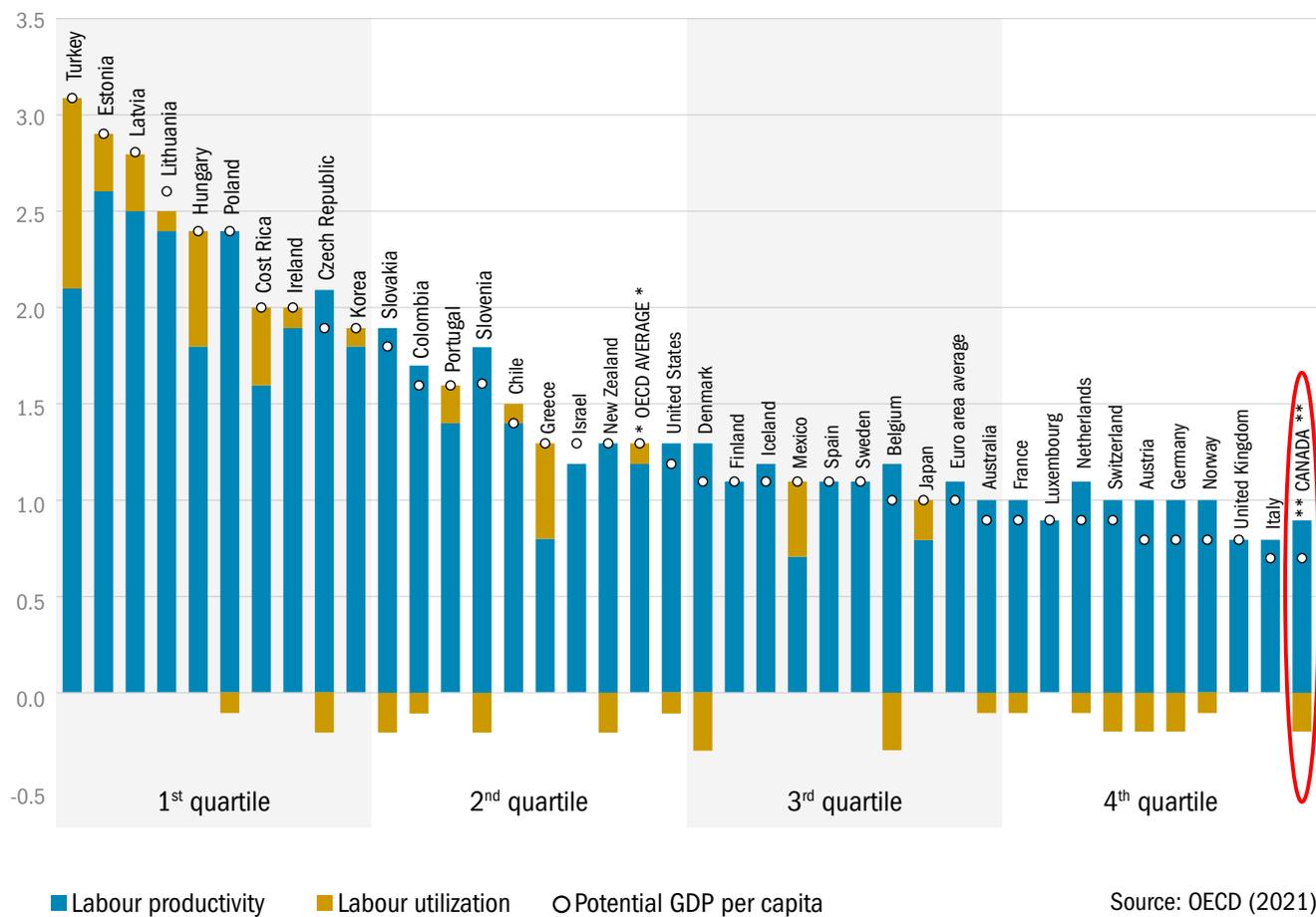
In response to these challenges, Prime Minister Mark Carney has said that Canada "will need to think big and act bigger. We will need to do things previously thought impossible, at speeds we haven't seen in generations."⁴ Doing so will require a significant increase in productivity, one that will demand contributions from government, business, the civic and social sectors – and from higher education.



OECD PREDICTS CANADA WILL BE THE WORST PERFORMING ADVANCED ECONOMY OVER 2020-2030

Growth per annum (%)

Projected real GDP per capita growth, CAGR, OECD countries, 2020-2030





PRODUCTIVITY, ARTIFICIAL INTELLIGENCE, AND HIGHER EDUCATION

Economies with rising economic productivity grow faster, create more employment, and generate higher wages – all with less risk of inflation. For most of the last 30 years, however, Canada’s economy has made only incremental productivity gains, significantly smaller than those of our American counterparts. And since 2020, Canada’s business productivity has declined by 0.6%,⁵ falling further behind the U.S. and losing ground to our international peers. The erosion in productivity reflects recent trends in public-sector institutions, such as the 40% increase in the size of the federal public service since 2015.⁶ It also reflects longer-term structural weaknesses undermining Canada’s long-term economic prospects.



Defining Productivity

Rising productivity results from the combination of 3 elements: capital intensity (better tools), labour composition (better skills), and multifactor productivity (using both more efficiently). Put another way, productivity can be understood as ***the intersection of innovation, skills and collaboration.*** Productivity foregrounds the role of human brainpower and relationships in the economy.

A lack of investment in research and development.

In 2023, Canada spent a mere 1.81% of its Gross Domestic Product on research and development – down from 1.87% in 2021.⁷ That figure places Canada second-last among G7 countries in R & D intensity and below the OECD average of 2.68%. Canada is also the only G7 country where business investment accounts for less than 50% of all R & D spending; the OECD average is 65%. Canada’s public and private sectors must establish a sense of common urgency to reverse this trend, and to invest and re-invest in Canada’s future success.

Struggling to scale companies up. Canada has a strong entrepreneurial culture, with small and medium-sized businesses accounting for roughly 50% of the country’s gross domestic product on average.⁸ Canada excels at generating startups, but it struggles to scale innovations into widespread business practices and to grow its homegrown firms.

Reliance on natural resources and commodities over value-added production.

Primary products such as metal ores, non-metallic minerals, forestry, energy and agriculture account for more than 50% of Canada’s total exports.⁹ Be it our wood pulp, our aluminum or our critical minerals, Canada needs to capture the higher value that comes from secondary and tertiary processing – transforming and innovating with those resources before they leave our borders. We also need to promote and secure more robust domestic markets for our own goods and materials. Otherwise, Canada is exporting opportunity itself.

In response, Ontario Premier Doug Ford has called upon the province to “tear down red tape, unlock our resources [and] unleash our economy,” including stronger investments in secondary and tertiary processing.

Promise and Peril: The X-Factor of Artificial Intelligence

Today, the next wave of productivity growth is being driven by increased digitization and automation, fueled by artificial intelligence. Given its ability to transform work processes across all sectors of the economy, the advent of AI is widely expected to usher in a fifth industrial revolution. Companies are only just beginning to discover the many ways that AI can already improve their business processes – to say nothing of what AI will be able to do 10 years from now, as it continues to advance in sophistication.

Yet Canada's adoption of artificial intelligence has been sluggish. Recent analysis shows that two thirds of Canadian businesses have no plans to adopt AI in the coming year, while only 14.5 per cent of businesses do.¹⁰ Meanwhile, globally, 78% of businesses currently use AI in at least one function,¹¹ and the technology is saving employees a reported average of 5.4% of hours worked.¹²

AI adoption is poised to be the single most important variable in Canada's efforts to improve productivity. But those improvements will only come with widespread use of the technology in business, government, and institutional sectors such as health and education.

AI's Productivity Potential

A sustained 1% increase in productivity over 10 years in Canada would translate into as much as \$300 billion in GDP growth – the equivalent of an additional \$7,000 in GDP per capita.

Source: Canada 2020





The Productivity Paradox: The Weakening Link with Higher Education

Historically, rising levels of educational attainment have gone hand in hand with higher productivity: a more skilled workforce has typically translated into a stronger, more productive and more resilient economy. But this linkage no longer holds true. Accounting for both college diplomas and university degrees, 63% of Canadians hold post-secondary credentials, one of the highest rates in the world and 22% higher than the OECD average.¹³ Yet even as educational attainment has remained high, productivity growth has slowed.

This paradox points to a misalignment between Canadian higher education and the changing economy, one that fuels Canadians' sense of precarity by eroding their confidence in the education system. If higher education isn't making tangible contributions to the betterment of Canada's economy – if it is not sufficiently supporting both the private and public sectors, helping to generate innovation, employment and wealth – then it is eroding the “improved career prospects” it promises to students.

Businesses today struggle to find the talent they need in areas such as advanced manufacturing, clean energy systems, cybersecurity, and more. And the skills gap will grow wider with the advent of AI and increased automation.¹⁴

Higher education's contributions to Canada's economic growth and productivity must be more direct, more substantial and, in the age of AI, more technology driven. One of the system's overarching goals must be to help Canada create an economy for the future, one that continually creates new employment whose job descriptions have yet to be written – and that is ready to train students for those jobs as they appear.



POLYTECHNICS: A DIFFERENT MODEL OF HIGHER EDUCATION

Canada's post-secondary landscape has long been understood as a binary choice: college or university. This understanding has been in place since the 1960s, and by and large it has served Canada well: Canada's top universities are widely admired for their research proficiency, while the country's colleges provide fundamental, employer-focused training with a crucial focus on local and regional community needs.

However, Canada's post-secondary system is in fact not binary. There is another option available to Canadians, one that is mission-driven and credentials-focused, designed to bridge educational relevance with real-world economic needs: polytechnics.



Defining Polytechnic Education

Though polytechnics are often overlooked in the Canadian public imagination, they have been present alongside Canada's universities and colleges for more than 60 years, with academic and research missions distinct from both colleges and universities.

- The polytechnic model's **academic mission** is focused solely on the interconnection between theory and practice. Polytechnic programs are designed for relevance: they are career-oriented and highly responsive to changes in the job market, with classroom and laboratory learning that integrates input and feedback from industry partners. Polytechnic credentials range from short-cycle diplomas to baccalaureate and master's degrees.
- The polytechnic model's **research mission** is based entirely on industry collaboration and applied experimentation. Industry partners drive the research agenda, working with polytechnics to innovate and develop new technological applications, while retaining all intellectual property developments resulting from the collaboration. This arrangement, in turn, allows polytechnics to update course curricula for those technologies, the better to train those industries' future workforces.

Polytechnics are focused on their students' future and, by extension, on the future of their would-be employers. Through their combination of program relevance and applied research, polytechnics mobilize tremendous resources in support of the national economy.

Polytechnics In Europe: A Vital History, A Vital Mission

The history of polytechnics stretches back to the first Industrial Revolution, a time when scientific advances were rapidly changing the nature of production. Initially known as “mechanics institutes,” these institutions met a need that neither universities nor trade apprenticeships could: they provided education and training for the new technologies that were being enabled by rapid scientific advancement, while also helping to iterate those technologies for industrial application.

A jurisdictional review conducted for Humber Polytechnic¹⁵ reports that, in Europe, polytechnics have continued to serve this mission throughout the 20th century, playing a crucial role in post-war economic expansion.

In **Ireland**, the creation of Technological Universities in 2019 was driven by employer demand and national strategy, mandated to serve non-traditional learners and to maintain strong ties to regional industry. These institutions now enrol over 90,000 students, with more than half in degree programs. Faculty credentials are tightly regulated, with a minimum of 45% required to hold doctorates in degree-level programs. Ireland’s polytechnics have been central to the country’s successful innovation and workforce development strategy.

In **the Netherlands**, Universities of Applied Sciences enroll 72% of all domestic baccalaureate students. Their programs are longer than those at research universities to accommodate mandatory internships. Professors at these institutions are appointed specifically to lead practice-oriented research, often in collaboration with industry. The Dutch government supports this work through Centres of Excellence and Top Consortia for Knowledge and Innovation, which bring together academia, business, and entrepreneurs.





Finland

Finland's Universities of Applied Sciences (UAS) are similarly embedded in the national economy. They offer bachelor's and master's degrees, with master's students required to have three years of relevant work experience. The Finnish government allocates 15% of national research funding to UAS institutions, recognizing their role in applied research and regional development. Industry plays a direct role in shaping program offerings through the National Forum for Skills Anticipation, which prioritizes workforce needs over student demand in guiding enrollment decisions.

Germany, the most frequently cited example, brought together the expertise of its engineering schools and vocational institutes in 1968 to create the *fachhochschulen*, or Universities of Applied Sciences. Offering skills training that culminates in a Bachelor or Masters degree, Germany's 211 *fachhochschulen* have since underpinned the country's industrial economy, the largest in all of Europe. Many other European nations have also embraced and enshrined the polytechnic model within their higher education systems.



Applied research has become a widely recognized priority in European higher education. Horizon Europe, the European Union's massive €95.5 billion public research funding program for 2021-2027, dedicates 70% of its funds to applied research: solving global challenges, improving European industrial competitiveness, and boosting innovation, the latter with a strong focus on participation by small and medium-sized businesses. Horizon Europe's proposed renewal for 2028-2034 retains these priorities, with €115 of a proposed €175 billion earmarked for applied research.

The OECD expects the economies of all the countries listed above to outperform Canada's through 2030, with Ireland among the strongest for projected growth.¹⁶ In that country, polytechnics work in close collaboration with the public and private sectors to evolve as economic and social circumstances change. Ireland created its current Technological University polytechnics in 2019 as a means of elevating its former institutes of technology. They now feature one of Europe's highest standards for faculty credentials – 45% must hold a PhD – and one of its most vibrant research enterprises, fueled in part by research collaboration vouchers for small and medium-sized businesses.

The objective at the heart of Ireland's reform is to ensure that polytechnic education is equipped to keep pace with the broader changes transforming business, industry, and the economy writ large.



Producing Results for Students

A recent academic study in Ontario found that college and polytechnic degree holders, two years after graduation, earn a wage premium of 5-14% compared to their university counterparts, most notably in the applied and technical fields.¹⁷





MEETING THE MOMENT: THE UNTAPPED POTENTIAL OF POLYTECHNIC EDUCATION

The need to improve productivity is not a matter of mere statistics or an issue in need of further study. It's a boots-on-the-ground effort to reverse decades of substandard economic performance. Among the most powerful levers at Canada's disposal in this initiative – and among its most underutilized – is polytechnic education.

Polytechnics are designed for speed, for relevance, and for impact. They are built to adapt quickly, respond directly to industry needs, and convert knowledge into tangible outcomes – a role that supports both industrial productivity and knowledge-driven university research. They train students not only for employment but for employability: the ability, the resilience, and the agility to learn and keep learning throughout their career trajectories.

This approach is explicitly understood at every level of the polytechnic institution, informing all aspects of the polytechnic mission: faculty hiring, curriculum development, corporate partnerships and beyond. It is a crucial part of how polytechnics support small and medium-sized businesses in Canada, by endowing graduates with stackable credentials and skills that are transferable to a variety of work settings.



Humber's Programs Tailored for Demand

200+ full-time programs in 17 areas of interest:

- 2 Master's Degrees
- 32 Honours Bachelor Degrees
- 68 Ontario Graduate Certificates
- 27 Advanced Diplomas
- 60 Diplomas
- 7 Apprenticeships
- 26 Certificates

Academic Programs that Respond to Changing Needs

The defining characteristic of polytechnic education is its responsiveness, its ability to meet industry at the speed of change. In an economy where technological revolutions happen in months, not decades, this educational capacity is essential.

For areas of study in which they have established proficiency, polytechnics can launch programs in months, not years, without compromising quality. They do so by engaging directly with industry leaders, identifying the skills gaps that threaten competitiveness, and responding before opportunities are lost. In the past year alone, working in direct consultation with industry leaders, polytechnics in Canada have created dozens of new programs in health technology, clean energy, advanced manufacturing, and the skilled trades—fields that are not just growing, but essential to Canada's economic renewal.

By moving quickly, polytechnics ensure that skills pipelines are aligned with real demand and that Canadians can access timely training opportunities in growing sectors, alleviating the growing sense of precarity by ensuring greater job and income security for younger Canadians.

That speed is a crucial advantage in an economy where the half-life of skills is shrinking. As artificial intelligence, automation, and digitization reshape the workplace, Canadian workers will require continuous learning that combines sophisticated curriculum with speed of delivery—a dynamic that requires close industry collaboration for educational institutions to adapt.

Polytechnics provide the necessary infrastructure and flexibility to deliver industry-focused, just-in-time training that is both rigorous and practical, ensuring that the workforce remains competitive in a rapidly evolving global economy. With credentials layered into stackable certificate-diploma-degree pathways, polytechnics make reskilling and upskilling swift, accessible, and practical for workers and employers alike.



Applied Research: Innovation with Purpose

Canada's productivity crisis wasn't caused by a shortage of ideas; it was caused by a shortage of builders to implement them. Put another way: Canada's laudable track record of investment in basic, discovery-driven research has come at the expense of applied research.

Polytechnics can help establish a better balance. Polytechnic research is collaborative, industry-driven, and oriented toward solving real-world problems. Faculty and students work directly with industry partners to prototype new technologies, test applications, and improve processes. The goal is not publication but practical impact.

By collaborating with polytechnics, firms of all sizes, including small and medium-sized enterprises, can access specialized expertise, advanced equipment, and fresh ideas from faculty and students. Crucially, the intellectual property generated through these partnerships remains with the industry partner. This arrangement lowers barriers to collaboration and accelerates the transfer of knowledge from the classroom and laboratory into commercial practice, and entirely for commercial benefit.

Polytechnic research partnerships have the potential to immediately improve Canada's lagging adoption of AI tools and stimulate private-sector R & D investment levels, which are a primary driver of productivity.

What Polytechnic Partners Say About Applied Research Collaboration

- **51%** say their collaborations increased their **R&D** capacity
- **48%** say their applied research projects improved their **competitiveness**
- **26%** say their business was able to access **new markets**, including outside Canada, as a result of their collaboration

Source: [Polytechnics Canada](#)



Serving a National Mission

Higher education in Canada has made essential contributions to both global scientific research and to local workforce needs. But to truly fulfill its mission, Canadian higher education must also serve Canada and its economy at a national scale. Polytechnic education is designed to do just that, and placing greater emphasis on polytechnics can help Canada enhance productivity and improve competitiveness.

Consider the potential of keeping value-added critical-mineral processing at home, homeshoring as much of the value chain as possible. Consider the need for skilled labour in Canada's military as the government ramps up its investment in national defence.

Consider Canada's effort to extend its global expertise in nuclear energy to small modular reactors – such as the Darlington New Nuclear Plant, one of the first initiatives approved by the new federal Major Projects Office. In cases such as these, polytechnics offer a means of training the workers, testing the technologies, and helping firms make the business case for domestic investment.

Consider also Canada's coming building boom as the country seeks to increase housing supply and upgrade its infrastructure – and the looming labour shortage that will hamper the country's efforts. Deloitte estimates that, to meet the targets established by the federal government, Canada will require up to half a million additional construction workers by 2030.¹⁸ Polytechnics have the capability to expand programs, working directly with builders and developers to ensure graduates are career-ready when they arrive on site.

Polytechnics can also support generational investment in our military by developing educational programs, engaging in applied research, and providing meaningful prior learning assessments to military members, families, and veterans. Polytechnics can also boost the adoption of Canadian technologies and services in new trading partnerships: when Canadian technologies find new markets, they can be accompanied by Canadian-owned technical education to support their adoption. By doing this, polytechnics become a key partner in international trade.

Fostering a Culture of Competitiveness

At its core, productivity is not only about inputs and outputs. It is also about mindset: the willingness to innovate, the ability to collaborate, and the drive to excel. Canadians have earned a reputation for being deferential, symbolized by our reputation for saying “sorry” even when we are not at fault. Canada needs to stand strong, confident in the belief that the country can compete with anyone – and not only keep pace, but lead.

Polytechnics cultivate this culture of competitiveness, because it’s embedded in their mission. As career-focused, applied-research institutions, polytechnics are always thinking about what’s next for their students and for employers. By the same token, polytechnics offer a unique appeal to students with a desire to contribute, and to industry partners with the drive to improve.

Graduates leave not only with technical competencies but with the confidence and ambition to contribute to Canada’s economic performance. This culture is contagious. It spreads across industries and sectors, changing the way Canadians think about work, innovation, and success. It is precisely the culture Canada needs if it is to reverse decades of underperformance and reclaim its place among the world’s most productive economies.





The Polytechnic Experience

For students, the experience of polytechnic education is unique. Polytechnics embed students in environments where problem-solving, teamwork, and industry engagement are the norm, mirroring the demands of the modern economy. Students and faculty work side by side with industry, solving problems in real time. Faculty forge partnerships that demand collaboration and reward ambition.



HUMBER POLYTECHNIC: WE ARE PRODUCTIVITY

As Canada's largest and most comprehensive polytechnic, Humber Polytechnic — the sponsor of this publication — embodies the spirit and ambition of applied teaching and research in Canada. Simply put, Humber is productivity.

Founded in 1967, Humber serves more than 76,000 learners through more than 200 full-time programs across six academic Faculties, including over 30 degree-level programs designed by faculty with a potent combination of industry experience and academic credentials — more than 60% of faculty members hold doctoral credentials. Humber created a total of 45 new programs in 2024-25, leveraging its established expertise in key fields to address the changing needs of Canada's economy and its labour market, whether to meet the urgent needs of Canada's health and life sciences sector or to support Canada's energy ambitions.

Humber's applied research program has also been recognized for its excellence. In 2025, Humber was ranked number one in Canada by Research Infosource for industry investment in applied research, and number two in Canada for both industry partnerships and paid student researchers. This recognition is testament to industry confidence in the talent of Humber's faculty and staff, and to the productivity and competitiveness improvements they catalyze.

Humber has launched its first graduate programs: the Master of Computer Science – Cybersecurity Operations Management, and the Master of Engineering in Advanced Manufacturing Engineering. Home to Canada's Advanced Manufacturing Skills Consortium, Humber's mechatronics students have garnered more than 29 gold, 14 silver, and 4 bronze medals in national and international competitions in just two decades, including gold in 2025 at both Skills Ontario and Hannover Messe in Germany — showcasing the skills that Canada needs to establish a stronger, globally competitive domestic manufacturing sector.



Humber continuously applies its drive to innovate and improve productivity to its own operations.

- As one of the very first institutions in Canada to establish guidelines for AI usage, Humber is integrating artificial intelligence as an essential competency across the entire curriculum, so that all graduates are able to apply AI in the workplace. We bring a similar approach to all our industry collaborations, deploying AI to improve project outcomes. Driven by a decade of investment in green technologies, Humber aims to reach net zero by 2029 ten years ahead of its original plan.
- Humber recently signed a partnership MOU with Stelumar Advanced Manufacturing Inc. (SAMI), the modular-housing development firm created by Mattamy Homes founder Peter Gilgan. The partnership will place Humber at the forefront of homebuilding innovation, training workers in new construction technologies that will help solve Canada's housing shortage.

Humber Polytechnic strives to be the bridge between thinking and doing, shaping minds that can both imagine and execute. Humber embraces its role as an architect of opportunity, sculptor of solutions, and proponent of productivity. Humber is the institution that builds what has yet to be imagined – what Humber calls *Building Brilliance*.

PRODUCTIVITY NOW

Canada's polytechnics are poised to serve as the higher education catalyst for Canada's productivity turnaround. Polytechnics deliver on a mission distinct from both their university and college counterparts: to provide Canadian industry with academic expertise, applied research capability, and curricular adaptability that directly supports their businesses. Amid the economic headwinds now facing the country, it's time for Canada to embrace polytechnic education, and to empower it.

From the shock waves rippling through the global trading system to the advent of artificial intelligence, the pace of economic change will only quicken from here. Canadian businesses and their workers will need to innovate and adapt continuously, and they will need their higher education partners to be equally as nimble.

It's the kind of moment polytechnics were made for. Polytechnics provide students with an applied education that is grounded in theory, yet designed to be relevant to, and productive in, the world beyond campus. Polytechnics help businesses leap forward by giving them access to faculty and student brainpower, allowing them to shape course curricula and learning outcomes, and supporting their research priorities through direct collaborations in which they retain all intellectual property.

Government policy needs to enable the maturity of polytechnic institutions in Canada. With a series of targeted measures, public policy in Canada could amplify the benefits of polytechnic institutions. Elected officials, policymakers and industry leaders need to recognize polytechnics not as peripheral institutions but as central actors in the nation's higher education landscape and in its economic future.

- Polytechnics need the latitude to engage industry partners more directly – be it program development, research, or infrastructure development, existing public policy is encumbered by red tape that does not set up these institutions for success.
- Polytechnics need the ability to move more swiftly in the development of new programs. With governments as a partner, we can establish approval processes that move at a pace that matches the timeframes for business decision-making.
- Polytechnics and their research partners need more equitable research funding. Applied research funding for colleges and polytechnics represents only 3% of government-funded research in Canada. An increase in applied research grants, up to a target of 10% of total system funding, would represent a modest share of the total, especially given the significant funds dedicated to applied research in Europe. Yet it would serve as a significant investment, enabling polytechnic industry partners, including SMEs, to de-risk technology adoption and increase their productivity.

This is what it means to “break the glass:” it means making substantial, targeted reforms to unleash a higher education model – the polytechnic model – so it can better serve the national interest. A clear lesson from Canada’s productivity crisis is that the linkages between post-secondary education and national economic prosperity have withered. Polytechnics can mend those broken linkages and raise higher education’s contributions to industry, the economy, and the country.

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